

What is claimed is:

1. A surgical retractor system for creating an opening through an incision in a patient comprising:

a drive mechanism having a first housing and a second housing, said first housing
5 being moveable relative to said second housing; and
a first retractor blade and a second retractor blade, each of said first and second retractor blades having a first end, a second end, and a retractor body extending therebetween, said first end of said first retractor blade being detachably mounted to said first housing and said first end of said second retractor blade being detachably mounted to
10 said second housing.

2. The surgical retractor system of claim 1 wherein said retractor body of each of said first and second retractor blades further comprises at least one channel adapted to receive opposite sides of said incision.

3. The surgical retractor system of claim 2 wherein said incision is through
15 the sternum and said at least one channel on said first and said second retractor blades is adapted to receive opposite sides of the severed sternum.

4. The surgical retractor system of claim 1, further comprising an elongate rail oriented along at least a portion of a length of at least one of said retractor bodies.

5. The surgical retractor system of claim 4 wherein said rail is a channel
20 formed within said at least one retractor body.

6. The surgical retractor system of claim 4 wherein said rail extends outwardly from said at least one retractor body.

7. The surgical retractor system of claim 6, wherein said rail has a T-shaped cross-section.

8. The surgical retractor system of claim 4, wherein said rail further comprises a plurality of suture holders.

5 9. The surgical retractor system of claim 4, wherein said rail further comprises a plurality of open slots for receiving one or more sutures, said slots being transverse to said rail.

10. The surgical retractor system of claim 9, wherein said open slots further comprise a means for locking said sutures within said open slots.

10 11. The surgical retractor system of claim 9, wherein at least one of said open slots have a first slot section which bifurcates into a second slot section and a third slot section.

12. The surgical retractor system of claim 9, wherein each of said second slot sections and said third slot sections further comprise a means for locking said sutures
15 within said second and said third slot sections respectively.

13. The surgical retractor system of claim 6, wherein said rail has a top section adapted to engage a separate mount and a plurality of open slots for receiving one or more sutures, said open slots being generally transverse to said rail and having a depth which allows said one or more sutures to be positioned below said top section.

20 14. The surgical retractor system of claim 4 wherein said rail is substantially straight along its length.

15. The surgical retractor system of claim 4 wherein said rail is curved along its length.

16. The surgical retractor system of claim 1, wherein each of said first and second housings have at least one pin extending therefrom and each of said first and second retractor blades have a mating hole formed therein for receiving said pins when said first and second retractor blades are attached to said first and second housings.

5 17. The surgical retractor system of claim 16 wherein said pins are cylindrical.

18. The surgical retractor system of claim 16 wherein said pins are tapered.

19. The surgical retractor of claim 1 wherein at least one of said first and second retractor blades have a flexible polymeric flap extending therefrom and adapted to retain soft tissue surrounding said incision.

10 20. A surgical retractor system for creating an opening through an incision in a patient comprising:

a drive mechanism having attached thereto a first retractor blade and a second retractor blade, said first and second retractor blades being substantially parallel and adapted to engage opposite sides of said incision, said first retractor blade being
15 moveable relative to said second retractor blade;

at least one of said first and second retractor blades having a rail extending upwardly therefrom, said rail having at least one open slot for receiving one or more sutures therein.

21. The surgical retractor system of claim 20, wherein said rail has a top
20 section adapted to engage a separate mount.

22. The surgical retractor system of claim 21, wherein said rail has a T-shaped cross-section.

23. The surgical retractor system of claim 22 wherein said at least one open slot is transverse to said rail, said at least one open slot having a depth which allows said one or more sutures to be positioned completely below said top section.

24. The surgical retractor system of claim 20 wherein said rail is curved along
5 its length.

25. The surgical retractor system of claim 20 wherein said first retractor blade has a first rail and said second retractor blade has a second rail, said first and second rails being curved along their respective lengths.

26. The surgical retractor system of claim 20 wherein said at least one open
10 slot has an internal wall and said surgical retractor system further comprises a suture locking member, said suture locking member comprising a body having a fixed end and a free end, said free end engaging said internal wall so as to clamp a suture placed between said free end and said internal wall.

27. The surgical retractor system of claim 26 wherein said body is at an acute
15 angle relative to said open slot.

28. The surgical retractor system of claim 26 wherein said body is substantially rigid and pivots about said fixed end.

29. The surgical retractor system of claim 26 wherein said body is flexible.

30. A surgical retractor for use in operating on a heart, comprising:
20 a drive mechanism having a first retractor blade and a second retractor blade attached thereto in an opposing relationship for engaging opposite sides of an incision into the thoracic cavity, said first retractor blade being moveable relative to said second retractor blade to create a widened opening through said incision;

at least one of said first and second retractor blades having an open slot for receiving a suture, said open slot having at least one internal wall; and

a suture locking member, said suture locking member comprising a body having a fixed end and a free end, said body being pivotable about said fixed end so as to urge said
5 free end against said internal wall.

31. The surgical retractor of claim 30 wherein said body has a central axis extending from said free end to said fixed end, said central axis of said body being at an angle of less than 90 degrees with said open slot.

32. The surgical retractor of Claim 31 wherein said angle is between about 65
10 degrees and about 90 degrees.

33. The surgical retractor of claim 31 wherein said free end has a plurality of ridges formed therein.

34. The surgical retractor of claim 30 wherein at least a portion of said fixed end is substantially cylindrical.